

# Micro Learning As Innovative Process of Knowledge Strategy

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**Abstract:**-This research paper analyses and highlights the significance of micro learning in the education industry. Technological innovation has made our society a knowledge intensive one, where successful performance of individuals or groups heavily relies on the acquisition and utilization of relevant information contents and suitable communication means to achieve task objectives. Micro learning is a new research area aimed at exploring new ways of responding to the growing need of lifelong learning or learning on demand for members of our society, such as knowledge workers. The education industry is regularly updating curriculum to cope with the changing demand of industry and business to meet the challenges in the internal and external environment of businesses. In this research a quantitative research methodology is used based on a questionnaire survey. The result of this study highlights the importance and need of micro learning in education industry.

**Index Terms:**- micro learning, education, interaction, knowledge, work-based learning, internet, micro content

## 1. INTRODUCTION

Micro learning emerges from micro content. Micro content is little bits of digital information in a permanent state of flux and circulation [1]. It is often a single topic, limited in length, consumed quickly, and often limited by software or device. It is the sharing of resources. It relies on human-to-human interaction and interaction with Internet media [6]. Micro learning takes on an active role in the filtering and the supply of information. With the help of the knowledge about the learning context of the user, micro learning can offer and initiate interesting information. Current technological, economic and social changes trigger the need for new concepts and strategies to support lifelong learning. Education, including work-based learning, is in need of transformation, requiring renewal and innovative ways of relating appropriately to the way we live, work and learn today. Micro learning can be understood in multiple ways which can refer to micro aspects of a variety of phenomena including learning models and concepts. Micro learning plays an important role in that stage of knowledge creation as many learning processes are based on observation and data collection [1][2]. Every observation is a micro-step in the process of learning and theory/knowledge construction [9]. Micro learning technology supports the process of documentation of observational knowledge; e.g., by providing structured forms for documentation. Concepts of micro learning offer flexible and dynamic alternatives which are needed in view of medial, societal and environmental changes [13].

Technological innovation has made our society knowledge intensive, where successful performance of individuals or groups heavily relies on the acquisition and use of relevant information contents and suitable communication means to achieve task objectives. Micro learning is a pioneering research aimed at exploring new ways of responding to the growing need of lifelong learning or learning on demand of members of the society, such as knowledge workers [7][8]. It is based on the idea of developing small chunks of learning content and flexible technologies that can enable learners to access them more easily in specific moments and conditions of the day, for example during time breaks or while on the move.

## 2. METHODOLOGY

Core objectives of this study is to create knowledge awareness among the readers on the importance of micro learning as strategic process for creating, harvesting, acquiring, retaining and applying knowledge learning and how that knowledge helps achieve planned outcomes, benefits or results. The research design will focus on relevant issues concerning micro learning, knowledge gap impacts on business performance, and the need for up gradation of skills against the backdrop of fast changing innovative technologies. The study would help decision-makers in both government and private organizations to effectively deal with challenges in their internal and external business operating environments by allowing micro learning to deliver and strengthen the learned corporate society. Respondent's population for the research will be kept down to a small number of 100 respondents. For the purpose of obtaining information for research studies on "Micro learning As Innovative Process of Knowledge Strategy" information would be gathered through interviews conducted over telephone, e-mails, face-to-face meetings etc.

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**1. True/False Questionnaire**

	TRUE	FALSE
Microlearning based on micorcontent transforms knowledge acquisition process.		
Dynamic applications of micorlearning evolve with changing technologies, learner's needs, and knowledge requirements.		
Micro content are derived from cognitive sciences and linguistics.		
Personal Learning Environments (PLEs) is integrated effectively under micorlearning.		
Microlearning effectively delivers work-based need for knowledge.		

**2. Likert Scale Questionnaire**

	Agree	Strongly Agree	Disagree	Strongly Disagree
Microlearning covers diverse subjects – healthcare, engineering, aerospace, production, services, safety, and defense etc				
Knowledge acquisition processes under microlearning is based on micro aspects of observation and data collection. State your views.				
Short microlearning activities of 15 minutes duration offer greater flexibility for adoption in diverse everyday learning activities. State your views.				
Microlearning materials should be coproduced, assembled and modified by learners. Comment.				

**3. Microlearning dimensions strengthen knowledge inputs. State your view:**

Time	
Content	
Curriculum	
Form	
Process	
Mediality:	
Learning type	

**6. What are the key success factors of microlearning?**

Easy learning content transferability	
User friendly interface	
Universal access from multiple devices	
Application of sophisticated technologies	
Shared knowledge reading	
Interaction styles meeting personal needs	
Others.....(Please specify)	

**4. Microlearning process involves diverse phases which include the following, select**

Topic Outline	
Problem Definition	
Task Description	
Problem Solving	
Text-Writing	
Discussion	
Feedback	

**7. Personal Learning Environments (PLEs) offer learners interoperating digital artifacts covering, select your choice**

Individual Access	
Aggregation	
Arrangement	
Configuration	
Manipulation	
Reuse	
Remix	
Others.....(Please specify)	

**5. Microlearning activities deal with the following, select your choice**

Mind-Mapping	
Text-Editing	
Tagging	
Bookmarking	
Media cast Production	
Interactive Pictures	
Others.....(Please specify)	

**8. Digital revolution has codified knowledge in terms of the following, select your choice**

Reference Volume	
Books	
Scientific Journals	
Libraries of Working Papers	
Images	
Video Clips	
Sound & Voice Recording	
Graphical Displays	
Electronic Mails	
Others.....(Please specify)	

### 3. DATA ANALYSIS

The researchers made percentage analysis based on the basic data collected from the respondents. Out of the 100 questionnaires distributed for data collection for the research study, only 91 questionnaires were duly received from respondents. Review of received questionnaires indicated 6 questionnaires to be incomplete and so was removed from analysis. Following analysis is based on 85 questionnaires which were full and complete.

#### True-False Questionnaire Analysis

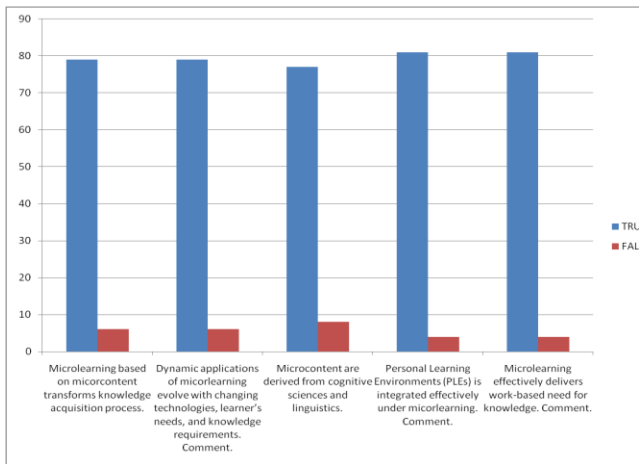


Figure 1: Microlearning Knowledge Inputs Dimension

To the inquiry on whether micro learning based on micro content transforms knowledge acquisition process, 79% of respondents believed as true. Almost 80% of the respondents believed in dynamic applications of micro learning evolve with changing technologies, learner's needs, and knowledge requirements. 75% of respondents believed that mrocontent are derived from cognitive sciences and linguistics. 81% of the respondents believed that Personal Learning Environments (PLEs) is integrated effectively under micorlearning. Almost 80% of the participants believed that Micro learning effectively delivers work-based need for knowledge.

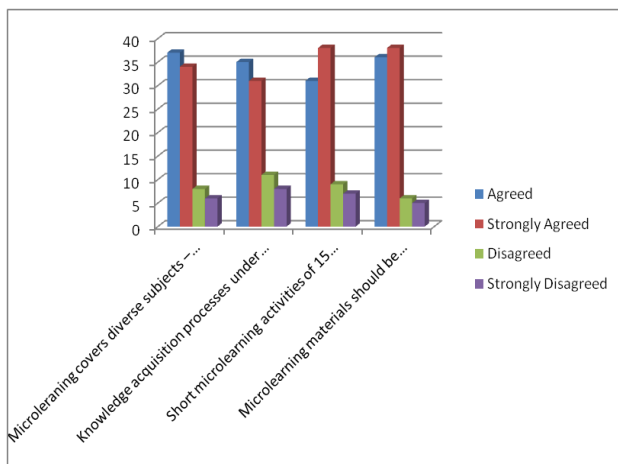


Figure 2: Likert Sclae questions

To the inquiry on whether micro learning covers diverse subjects – healthcare, engineering, aerospace, production,

services, safety, and defense etc, results obtained indicated 71 respondents (37 Agreed + 34 Strongly Agreed = 83.53%) supporting the fact with their perception that micro learning today can be applied to acquire and distribute knowledge across a wide business spectrum. However, 14 respondents (8 Disagreed + 6 Strongly Disagreed = 16.48%) did not confirm their favorable perception that micro learning can contribute to the knowledge creation, acquisition, delivery and transfer in diverse business settings or applications with outstanding effectiveness.

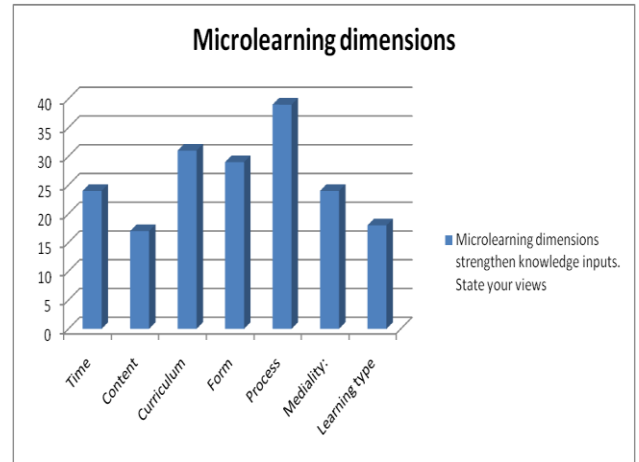


Figure 3: Microlearning Dimensions

With reference to the inquiry on the different aspects over which micro learning dimensions can strengthen knowledge inputs, figure 3 depicts results obtained from 182 respondents. It is portrayed that 21.08% of the respondents are of the view that process as a micro learning dimension strengthens knowledge inputs followed by curriculum which had the view of 17.03% of the respondents. However as depicted from the figure, Time and Modality had the same percentage of respondents, 13.19% each sharing the views that these micro learning dimensions strengthen knowledge inputs. Learning type had the view of least respondents at 9.89%

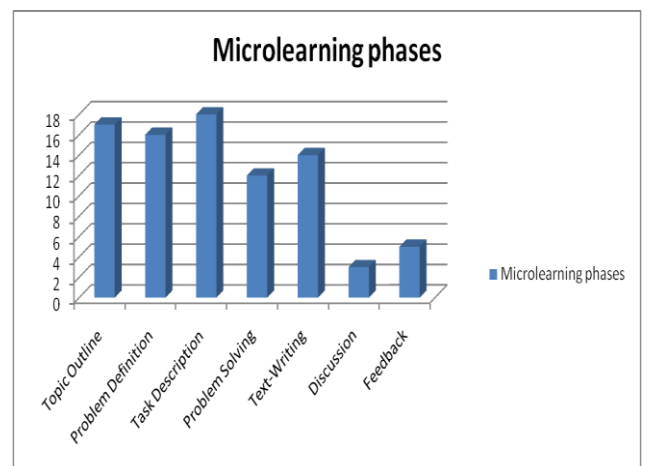


Figure 4: Microlearning Phases

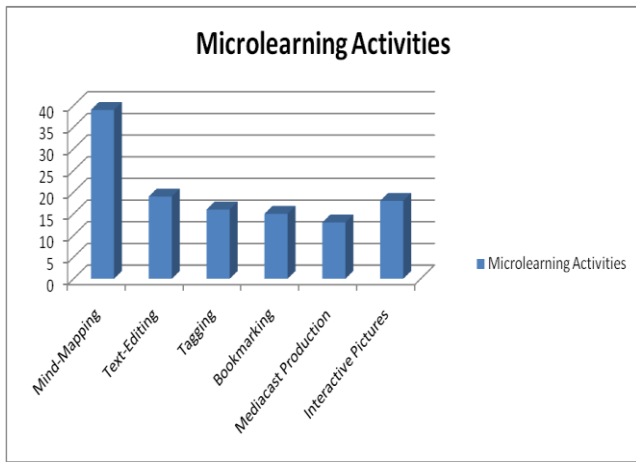


Figure 5: Microlearning Activities

Micro learning involves a set of specialized activities which ensure successful knowledge transformation. To the inquiry made in the research on elements or features which are used in micro learning which support knowledge transformation, figure 5 portrays that mind mapping as a micro learning activity has the highest view of respondents at 28.24%, the nearest to it is Text-Editing as a micro learning activity with 16.47%, the variation of respondents' view as depicted from the figure is significant. Bookmarking is least at 11.76% which presumably depicts how fast utility of books is declining in the current digital and electronic scenario.

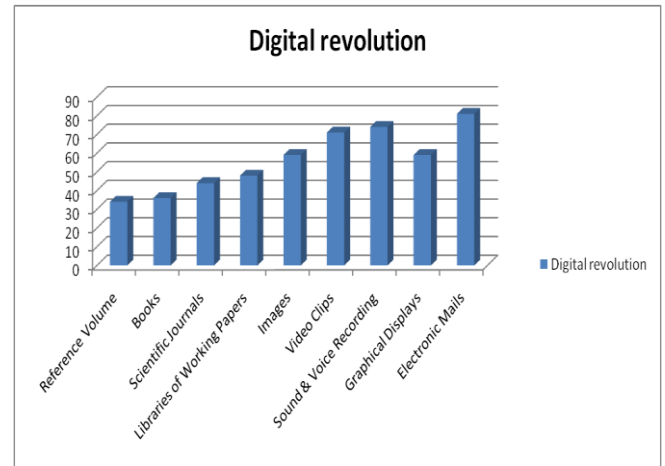


Figure 6: Digital Revolution

Figure 6 portrays the research directing the studies on knowledge codification brought about by the digital revolution. The figure highlights significant impact created by Electronic Mails as 23.53% of the respondents expressed their views followed by Sound & Voice Recording at 14.12%. Further observation from the figure reveals that Reference Volume has very insignificant impact as affirmed by merely 4.71% of the respondents.

4. CONCLUSION

Business survival today extensively depends on harvesting, acquiring, retaining and applying fifth or sixth generation knowledge skills and capabilities. In view of these factors micro learning is relied upon to provide strategic solutions which could help enterprise growth through sustained maintenance of knowledge assets by evaluating current and future knowledge gaps. Core knowledge skills achieved under micro learning are intended to enhance organization learning and performance productivity. The study has established that micro learning which is based on micro content of learning and delivery materials, systems and applications etc positively transforms knowledge. Micro learning is highly useful and could be applied for securing knowledge and skill growth in diverse subjects such as the healthcare, engineering, aerospace, production, services, safety, and defense etc. The research had found that the different aspects over which micro learning dimensions can strengthen knowledge inputs include – process, curriculum, form, time, Mediality and learning type. Micro learning process is highly sophisticated in the knowledge creation, acquisition, delivery, and transformations which are acquired through diverse phases of inputs such task description, topic outline, problem definition, text-writing, problem solving, feedback and discussion[4][12]. The study found that micro learning involves a set of specialized activities which ensure successful knowledge transformation. Active involvement of the learners would lead to the development of learning materials which would suit most appropriately to the creation, transfer and retention of knowledge.

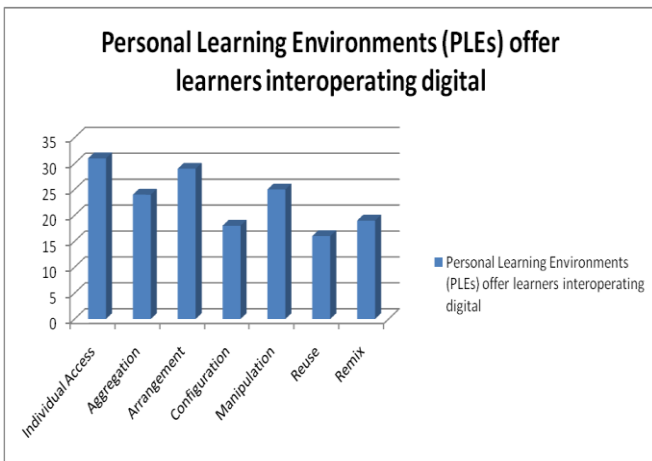


Figure 5: Personal Learning Environments

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